

Relieving internal stresses ...

25675 S/122/60/000/005/012/017
A161/A130

the formula

$$\delta V = \frac{V_{tr} - V_{aust}}{V_{aust}} \quad (5)$$

where V_{aust} - is the steel volume in austenitic state, and V_{tr} - in state after austenite decomposition. A series of β' values can be obtained by substituting different austenite transformation points T_{tr} into the formula (4). The linear expansion factor α_{aust} for different steel grades varies between 17 and 23×10^{-6} mm/mm · degree [Ref. 4, Spravochnik metallovedeniya i termicheskoy obrabotki (Handbook of metals and heat treatment) Metallurgizdat, 1956]. Substitution of different α_{aust} into the formula is equivalent to the steel choice, and a series of such dependences can be obtained for a certain solder with a known T_{sol} , or vice versa - different T_{sol} (which means different solders) can be substituted and a different series determined. The diagram presents two such series in graphical form. The dotted line indicates solders with $T_{sol} = 906^{\circ}\text{C}$ (brass), and the solid line solders with $T_{sol} = 1,083^{\circ}\text{C}$ (electrolytic copper). These are zero stress lines, and the coordinates are the austenite transformation temperatures (T_{tr}) and β' values plus zones of structures forming in austenite decomposition. Approximate hardness values (H_B) are included. The horizontal $\beta = 0.0136$ line is

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the top boundary of structures. Below it there are in sequence: martensite, troostite - martensite, sorbite, pearlite, austenite. The practical use of the diagram is explained. The analysis proves that zero stress is practically impossible to obtain with copper for solder on steel grades that are used for cutter shanks at the time being. Brass solder is better, for it permits an entire range of possible isothermic heat treatment. The best steel for copper solder is a grade with austenite expansion $20 \cdot 10^{-6}$ mm/mm · degree. It will give minimum internal stresses in a wide range of isothermic hardening temperatures. Obviously, the solder and steel compositions may be varied. The method is not yet sufficiently accurate for practical application, for the α_{aust} and β values must be determined more accurately for different steel grades. In special literature structure transformations have not been taken into account in determinations of stresses in hard-alloy tools. A calculation example is made with transformation expansion accounted for, in a practical case of the work portion of coal cutting machine teeth. The calculated stresses have been verified by x-ray analysis at the Laptevskiy mashinostroitel'nyy zavod (Laptev Machinery Plant) (by A. P. Mokrov and N. L. Shapiro). It was stated that the calculation matched the x-ray data, but calculations without transformation temperatures and their effect taken into account gave stress values exceeding the x-ray data about

Card 3/4

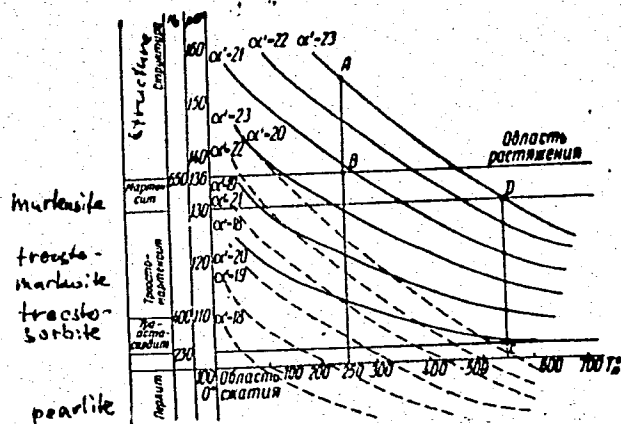
25675

S/122/60/000/005/012/017

A161/A130

Relieving internal stresses ...

5 times. Despite rough approximations used in determining the effect of structure transformations in the steel shank, the beneficial effect of heat treatment is obvious. There are: 1 figure, 1 table and 7 references: 5 Soviet-bloc and 2 non-Soviet bloc.



Card 4/4

ROMANCHENKO, N.L., kand.med.nauk; MAKHMUDOV, A.Ya.

Treatment of diabetes mellitus with diaboral and the state of
nutrition in the clinics of the Tashkent Medical Institute. Med.
zhur.Uzb. no.3:31-32 Mr '62. (MIRA 15:12)

1. Iz kafedry propedevtiki vnutrennikh bolezney lechebnogo
fakul'teta (zav. - doktor med.nauk G.M.Makhkamov) Tashkentskogo
gosudarstvennogo meditsinskogo instituta.
(UREA) (DIABETES) (DIET IN DISEASE)

BREYEV, A.; LAPSHIN, V.V.; ROMANCHENKO, N.

Reviews. Plast. messy no.3:71-73 '65.

(MIRA 18:6)

ROMANCHENKO, N.L.

Study of nutrition for music school pupils and its improvement.
Izv.AN Uz.SSR.Ser.med. no.4:83-88 '58. (MIRA 12:5)

1. Tashkentskiy gosudarstvennyy meditsinskiy institut.
(TASHKENT--SCHOOL CHILDREN--FOOD)

ROMANENKO, N. I.; OBLIVIN, A. N.

"Friction and heat transfer of a heated gas flow in a diffuser with cooled walls at temperature factor $T = 0.25$.

report submitted for 2nd All-Union Conf on Heat & Transfer, Minsk, 4-12 May 1964.

Moscow Wood Technology Inst.

ROMANENKO, P. N.; KRYLOVA, N. V.

"Heat transfer in the inlet portion of a tube with turbulent flow."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12
May 1964.

Moscow Wood Technology Inst.

ROMANENKO, P. H.; SEMENOV, Yu. P.

"Friction and heat transfer in a turbulent boundary layer over a permeable surface with the injection of liquids and gases."

report submitted for 2nd All-Union Conf on Heat & Transfer, Minsk, 4-12 May 1964.

Moscow Wood Technology Inst.

МЕХАНИКА ТЕЧЕНИЙ В ЖИДКОСТИ

[Heat transfer and friction in gradient fluid flow]
теплообмен и трение при градиентном течениях жид-
костей. Москва, изд-во "Энергия", 1981. 206 с.
(УДК 62-151)

ROMANENKO, Pavel Nizanorovich

[Heat transfer and friction in gradient fluid flow]
Teplotobmen i trenie pri gradientnom techenii zhid-
kostei. Moskva, Izd-vo "Energiya," 1964. 116 p.
(NIA 1541)

ROMANCHENKO, V., inzhener; ROMANCHENKO, G., inzhener.

Over-all lumber yard work mechanization. Mast. ugl. 4 no.11:
21-23 N '55. (MIRA 9:2)
(Lumberyards) (Moscow Basin--Material handling)

MASHKOVTSSEV, R.A.; SHLOMCHAK, G.G.; ROMANCHENKO, V.L.

Longer lasting grooves. Metallurg 10 no.4;29-30 Ap '65. (MIRA 18:7)

1. Dnepropetrovskiy metallurgicheskiy institut.

BOGOMOLOV, V.D. [Bohomolov, V.D.]; KAZAKOV, N.I.; LINOV, G.Ye. [Linov, H.E.]; FADEYEV, I.F. [Fadiev, I.F.]; VOINOV, I.P.; ZVYAGIN, S.D. [Zv'iahin, S.D.]; CHUDNOVSKIY, P.I. [Chudnovs'kyi, P.I.]; ROMANCHENKO, V.M.

In the economic councils of the Ukraine. Leh.prom. no.3:84-87
Jl-S '63. (MIRA 16:11)

1. Tsentral'noye byuro tekhnicheskoy informatsii Moskovskogo gorodskogo soveta narodnogo khozyaystva (for Bogomolov, Kazakov, Linov, Fadeyev).

ROMANCHENKO, V.M.

In the economic councils of the land. Leh.prom. no.1:
78-80 Ja-Mr '64. (MIRA 19:1)

ROMANCHENKO, V.M.

In the economic councils of the Ukraine. Lek. prom. no. 2:77
Ap-Je '64 (MIRA 17:7)

ROMANCHENKO, V.M.

New equipment for the scutching workshops. Len. prom. no.3:84 J1-S
'64.

Carding, spinning and winding equipment at the exhibition in Hannover.
Ibid.:84.

New drafting devices for the "Rowematic" roving machines. Ibid.:85.

High-speed machine for the production of twist yarn. Ibid.:86.

Manufacture of fabrics with the use of "Ribbonfil" fibers. Ibid.:86.

Multisection rib knitting machine for the manufacture of regular
articles. Ibid.:86.

Continuous line for fabric bleaching and processing. Ibid.:87.

New method for the production of rubber heels. Ibid.:87-88.

SHUL'GA, A.M. [Shul'tha, A.M.]; ROMANCHENKO, V.M.

Rolls for beel polishing. A.M. Shul'ga, V.M. Romanchenko. Let.
prom. no. 2857 Ap-Js'64 (MIRA 17c7)

BOIANCHIKOV, V. N., BUKHARIN, I. A.

Coal Mines and Mining--Moscow Basin

Experience with mechanization of shunting operations at loading points in drifts of the mines of the Moscow Coal Combine. Ugol', No. 1, 1952

9. Monthly List of Russian Accessions, Library of Congress, March 1952 ~~1953~~, Uncl.

BALON, I.D., kand.tekhn.nauk; ROMANENKO, N.T., inzh.; YUPKO I.D., inzh.;
BOLKUNOV, Ye.P., inzh.; TULUYEVSKAYA, T.A., inzh.; ASTAFUROV, P.I., inzh.;
VOLOVIK, A.V., inzh. Prinsipali uchastiye: BAKAYEV, A.I.; VOKHNIK, A.R.;
KOLOS, V.D.; KAYSTRO N.P. [deceased]; LITVINENKO, V.I.; MAKARCHENKO, N.M.;
ONOPRIYENKO, V.P.; PALAGUTA, V.P.; PIKA, V.S.; RAGIN, B.I.; ROMANCHENKO,
Ye.I.; SAYENKO, S.D.; STOLYAR, V.V.; SKORIK, N.M.; TOROPENKO, P.D.

Characteristics of making ferromanganese in large capacity blast furnaces
and the effect of slag conditions on basic technical and economic indices.
Stal' 23 no.12:1069-1073 D '63. (MIRA 17:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov i zavod "Zapo-
rozhstal'".

ROMANCHEV, Vasil'y Vasil'yevich; UL'YANTSEV, P.S., red.; PULIN, L.I..
tekhn. red.

[For high crop yields; an account of Valentina Gaganova's
followers in the agriculture of Tula Province] K vysokim
urozhaiam; ocherk o pervykh gaganovtsakh Tul'skoi derevni.
Tula, Tul'skoe knizhnoe izd-vo, 1959. 15 p. (MIRA 14:5)
(Tula Province--Agriculture)

VASIL'YEV, Georgiy Andreyevich, prof.; ROMACHEVA, I.F., red.;
MIRONOVA, A.M., tekhn. red.; CHULKOV, I.F., tekhn.red.

[Surgery on the teeth and oral cavity] Khirurgia zubov
i polosti rta. Izd.3., perer. i dop. Moskva, Medgiz,
1963. 426 p. (MIRA 17:3)

*

LEVCHENKO, B.L., inzh.; ROMANCHIK, K.K., inzh.

Tightening of large threaded units of steam turbines using carborundum
heaters. Elek. sta. 34 no.11:35-38 N '63. (MIRA 17:2)

L 23952-66 EWT(d)/EWT(m)/EWP(v)/T/EWP(k)/EWP(h)/EWP(l) DJ

ACC NR: AP6009819

SOURCE CODE: UR/0413/66/000/004/0008/0009

AUTHOR: Mun'os, M. V.; Filatov, A. S.; Romanchikov, B. F.; Zaytsev, A. P.;
Privedentsev, V. P.

37
B

ORG: none

TITLE: An electrohydraulic system for automatically controlling strip thickness on cold rolling mills. Class 7, No 178773 14

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 8-9

TOPIC TAGS: industrial automation, hydraulic equipment, cold rolling

ABSTRACT: This Author's Certificate introduces: 1. An electrohydraulic system for automatically controlling strip thickness on cold rolling mills. The device is operated by signals from a thickness meter. The quality of thickness control is improved by using a discrete system for automatic control of a hydraulic pressure device. This control system consists of a step-servo power motor, a circuit for controlling this motor and a regulator which has a zone of insensitivity with boundaries which are automatically changed by an amount equal to the motion of the pressure device and by a time interval equal to the transportation and measurement delay of the system. 2. A modification of this electrohydraulic system in which the speed is increased and the need for using roller position indicators is eliminated. The hydraulic pressure device

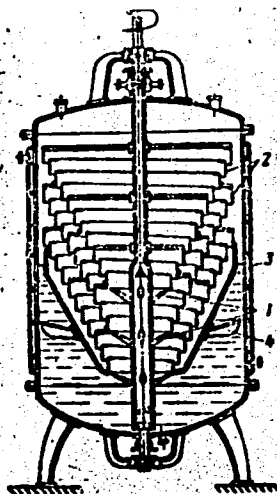
2

UDC: 621.771.237.016-523.3

Card 1/2

L 3952-66

ACC NR: AP6009819



1--actuating cylinder; 2--control valve;
3--feedback lever; 4--master screw; 5--
step-servo motor; 6--thickness gauge; 7--
hydraulic pressure device; 8--step-servo
motor; 9--control circuit for the step-servo
motor; 100--regulator; a--generators; b--
phase-sensitive power amplifier; c--unit for
selecting the zone of insensitivity; d--
code-to-voltage converter; e--divider;
f--master unit

consists of an actuating cylinder for set-
ting the roller span, a control valve with
lever-controlled motion feedback and a master
screw which is moved by the step-servo motor to control the roller span.

SUB CODE: 13/

SUBM DATE: 24Feb64/

ORIG REF: 000/

OTH REF: 000

Card 2/2 *W*

TRUBILOV, M.A., kand. tekhn. nauk; PROKHOROV, S.A., inzh.; LEVCHENKO,
B.L., inzh.; ROMANCHIK, R.K., inzh.

Change of the axial gaps of the VK-100-6 turbine during its
operation. Teploenergetika 11 no.3:61-66 Mr '64. (MIRA 17:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy teplotekhnicheskiy
institut i Leningradskiy metallicheskiy zavod im XXII s'yezda
KPSS.

LEVCHENKO, B.L., inzh.; NEKHENDZI, Ye.Yu., inzh.; ROMANCHIK, K.K.,
inzh.; KHASINA, E.A., inzh.

Study of tightening stresses in turbine pins using high-
temperature tensiometers. Energomashinostroenie 10 no.5:37-
39 My '64. (MIRA 17:8)

ROMANCHIK, Sergey Ivanovich, kand. tekhn. nauk, dots., KHONUKHARYAN
N.G., red.

[Construction equipment; summaries of lectures for correspondence students of transportation schools majoring in "Industrial construction and civil engineering"] Stroitel'nye mashiny; konspekt lektsii dlia studentov zachnogo obucheniia transportnykh vtuzov spetsial'nosti "Promyshlennoe i grazhdanskoe stroitel'stvo." Moskva, Vses. zachnyi in-t inzhenerov zhel-dor. transp., Pt.1. 1964. 149 p.
(MIRA 18:3)

ROMANCHIKOV, N., instruktor

Unused possibilities. Okhr.truda i sots.strakh. 5 no.3:25 Mr '62.
(MIRA 15:4)

1. Volgogradskiy oblastnoy sovet professional'nykh soyuzov.
(VOLGOGRAD--MEDICINE, INDUSTRIAL)

BRESLAVETS, L.P.; BEREZINA, N.M.; SHCHIBRYA, G.I.; ROMANCHIKOV, M.L.

Effect of ionizing radiations on the growth and development of
certain agricultural plants. Biofizika 1 no.7:628-632 '56.

(MLRA 9:12)

1. Institut biologicheskoy fiziki Akademii nauk SSSR, Moskva.
(PLANTS, EFFECT OF RADIATION ON)

BRESLAVETS, L.P.; BEREZINA, N.M.; SHCHIBRYA, G.I.; ROMANCHIKOVA, M.L.;
YAZYKOVA, V.A.; MILESHKO, Z.F.

Increasing the yield of radishes and carrots by irradiating seeds
with gamma and X rays before sowing. Biofizika 5 no.1:81 '60.
(MIRA 13:6)
(RADISH) (CARROTS) (PLANTS, EFFECT OF RADIATION ON)

BEREZINA, N.M.; SHCHIBRYA, G.I.; ROMANCHIKOVA, M.L.

Results of irradiating seeds of Rubin radishes under conditions of
hotbed culture. Radiobiologiya 1 no.3:461-462 '61. (MIRA 14:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva
(PLANTS, EFFECT OF GAMMA RAYS ON) (SEEDS)

BRODSKIY, A.S.; ROMANCHUK, D.Ya.

Use electromagnetic hydrodynamics in industry! Met. 1
gornorud. prom. no.3:79 My-Je '64. (MIRA 17:10)

ROMANCHUK, G.N., inzh.

Investigating the thermal state of the piston and sleeve
of the cylinder of the D50 diesel locomotive engine at
increased compression in the pressure charging. Sbor. nauch.
st. KHIT no. 67:43-48 '62. (MIRA 16:11)

ROSENBLIT, G.B., inzh.; ROMANCHUK, G.N., inzh.

Methods for investigating the temperature conditions associated with
the performance of the pistons of locomotive diesel engines. Trudy
KHIIT no.35:94-101 '60. (MIRA 13:10)
(Diesel engines)

ROMANCHUK, I.

COLLECTIVE FARMS - ACCOUNTING ...

Work of a bookkeeping instructor. Kolkh.proiz.,12, No.8, 1952.

9. Monthly List of Russian Accessions, Library of Congress, ~~November 1952~~ 1977, Uncl.

NOVAKOVICH, I. F.

NOVAKOVICH, I. F. -- "The Comparative Fattening of Young Swine of Fatty Breeds Raised in Ryazan' Oblast." Moscow: Order of Lenin Agricultural Academy named K. A. Timiryazev. Moscow, 1955. (Dissertation for the Degree of Candidate in Agricultural Sciences)

SO: 'Kishnaya Letopis', No 1, 1956

1. ROMANCHUK, I. I.
2. USSR (600)
4. Swine
7. Meat factory, Sots. zhiv., 15, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

Collective Farm - Leningrad;

Accounting in connection with the fulfillment of the estimated credit and debit of a collective farm. Trud. proizv. iz no. 3, 1982

9. Monthly List of Russian Accessions, Library of Congress, June 195~~8~~, Uncl.

2

L 27413-65 EWG(j)/EWT(1)/EWG(r)/FS(v)-3/EWG(v)/EWG(a)/EWG(c) Pe-5 DD

ACCESSION NR: AP5005387

S/0301/65/011/001/0027/0031

AUTHOR: Rubina, Kh. M.; Romanchuk, L. A.

TITLE: Glutathionereductase activity in the blood of normal and hypoxic rats

SOURCE: Voprosy meditsinskoy khimii, v. 11, no. 1, 1965, 27-31

TOPIC TAGS: hypoxia, hemodynamics, glutathionereductase, glutathione, hypoxia effect

ABSTRACT: White rats weighing 250 g were studied under conditions of normal respiration and acute hypoxia. Hypoxia was induced by 1 1/2 hours' "elevation" in a barochamber to a simulated altitude of 9700 m (ambient pressure, 200 mm Hg). Glutathionereductase activity was determined by measuring the amount of reduced glutathione accumulated in the following two consecutive reactions: 1) reduction of NADP by glucose-6-phosphate dehydrogenase; and 2) reduction of oxidized glutathione by the NADP formed in reaction (1). The reduced glutathione content was determined spectrophotometrically. Hypoxic rats were found to have statistically smaller amounts of reduced glutathione per 1 ml of red blood cells than the control animals. Hypoxia lowered glutathionereductase activity, thereby reducing the

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L 27413-65

ACCESSION NR: AP5005387

ability of red blood cells to hold glutathione in the reduced state. The total content of NADP and NADP-H₂ was higher in the blood of the hypoxic rats than in the controls. Orig. art. has: 1 figure and 2 tables. [CD]

ASSOCIATION: Kafedra biokhimi Pervogo Leningradskogo meditsinskogo instituta imeni I. P. Pavlova (Department of Biochemistry, First Leningrad Medical Institute)

SUBMITTED: 27Sep63

ENCL: 00

SUB CODE: PH, LS

NO REF SOV: 003

OTHER: 013

ATD PRESS: 3192

Card 2/2

IRUBINA, Kh.M., ROMANCHUK, L.A.

Activity of glutathione reductase of the blood in rats under
normal conditions and in oxygen insufficiency. Vop. med. khim.
11 no.1:27-31 Ja-F '65. (MIRA 18:10)

L. Kafedra biokhimii I Leningradskogo meditsinskogo instituta
imeni I.P. Pavlova.

RUBINA, Kh.M.; ROMANCHUK, L.A.

Quantitative determination of SH groups in whole and protein-free blood by the spectrophotometric method. Vop. med. khim. 7 no.6: 652-655 N-D '61. (MIRA 15:3)

1. Chair of Biochemistry, "I.P. Pavlov" First Medical School, Leningrad.

(MERCAPTO GROUP) (SPECTROPHOTOMETRY)
(BLOOD--ANALYSIS AND CHEMISTRY)

Romanchuk, L.V.

15
21
17
4E23
4E23
11
1/1

1 Porcelain glaze without lead and with a lower boron oxide content. Yu. G. Shtelnberg, F. S. Fadeev, L. V. Romanchuk, and Z. K. Susstisovskaya. *Trudy Gosudarst. Nauch. Issledovatel. Keram. Inst.* 1954, No. 1, 18-23; *Referat. Zhur., Khim.* 1955, Abstr. No. 55705. — Porcelain glazes without Pb, with lowered B_2O_3 content, in which CaO is partially replaced with equal wt. amt. of SrO introduced as the naturally found celestine, are developed and introduced in the production. The technological properties of the new glazes with lowered B_2O_3 do not differ from those of the former leadless-celestine glazes contg. 0.7% B_2O_3 . The broad firing range, high thermal resistivity, and normal development of underglaze colors are preserved. When the B_2O_3 content is lowered to 0.8%, the normal gloss of the glaze is preserved at a ratio $SrO:CaO = 1.62$. Lowering the B_2O_3 to 3.4% requires a ratio $SrO:CaO = 3.8$. The glaze has a compn. (in % by wt.): SiO_2 59.9, Al_2O_3 0.0, B_2O_3 3.4, SrO 9.5, CaO 2.5, MgO 1, Na_2O 11.5, and K_2O 3.2.

N. Vasileff

ROMANCHUK, L. A., RUBINA, KH. M., GEFTER, YU. M., DORBRINSKAYA, M. A.,
and ZAKHAROVA, A. V. (USSR)

"The Changes in Tissue Metabolism during Hypoxia and Therapeutic Effects."

Report presented at the 5th International Biochemistry Congress,
Moscow, 10-16 Aug 1961

ROMANCHUK, L.V.

SETMYNBERG, Yu.G.; ROMANCHUK, L.V.

Strontium glazes without boron for faience. Trudy GIKI no.1:38-47
'56. (MIRA 11:5)

(Glazes) (Strontium)

ALPHABETIC INDEX																										NUMERIC INDEX																																																	
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
<i>Equilibria in liquid mixtures and solutions. IX. Determination of the solubilities of acetylene and vinyl chloride in some solvents at 0° and pressures below one atmosphere. V. A. Kiriev and M. A. Romanchuk. J. Gen. Chem. (U. S. S. R.) 6, 78-80 (1936).—The procedure described in a previous paper (C. A. 29, 7157*) is used to det. the solubilities of C₂H₂ and vinyl chloride at pressures of 50-760 mm. in C₂H₅Cl, 97% EtOH and heavy naphtha, b. 150-250°, at 0°, and in kerosene, b.p. 140-250°, at -20°, 0° and 20°. The soly. of vinyl chloride deviates most from ideality at low temps. C₂H₅Cl is the best solvent for both gases. X. Determination of the solubilities of hydrogen and methane in some solvents at temperatures from -20° to 40° and pressures below one atmosphere. Ibid. 81-4; cf. C. A. 29, 7157*.—The solubilities of H₂ and CH₄ in xylene, kerosene, cracking benzine, C₂H₅Cl, and heavy naphtha were detd. at 50-760-mm. pressures and at -20°, -10°, 0°, 20° and 40° with the first 3 solvents and at 0° with the other 2. The results are tabulated. All of the systems obey Henry's law. Cracking benzine is the best solvent for both gases. The soly. of H₂ in xylene increases with temp. rise in the interval 20-40°. J. L.</i>																																																																											

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2

Determination of the solubilities of methyl chloride and ethyl chloride in organic solvents. S. I. Kaplan and M. A. Romanchuk. *J. Gen. Chem.* (U. S. S. R.) **6**, 950-4(1936).—The solubilities of MeCl and EtCl in C₂H₄, Cl₂ and CCl₄ at 20° and -10° and (60-700 mm. are represented by tables and graphs.
Chas. Blanc

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

RESEARCH DIVISION OF THE BUREAU OF MINES
GEOL. SURV. DEPT. OF INTER.

RESEARCH DIVISION OF THE BUREAU OF MINES
GEOL. SURV. DEPT. OF INTER.

ROMANCHUK, M. A. Cand. Chem. Sci.

Dissertation: "Adsorptive Properties and Catalytic Activity of Alumino-silicate Catalysts." Moscow Order of Lenin State U imeni "M. V. Lomonosov, 26 Mar 47.

SO: Vechernyaya Moskva, Mar, 1947 (Project #17836)

KISELEV, A.V.; MIKOS, N.N.; ROMANCHUK, M.A.; SHCHERBAKOVA, I.D.

Thermodynamic properties of adsorption films on silica gel. Zhur.fiz.
khim. 21 no.10:1223-1236 0 '47. (MLRA 7:1)

1. Moskovskiy gosudarstvennyy universitet, Laboratoriya adsorbtsii
kafedry fizicheskoy khimii, Moscow.
(Adsorption) (Silica)

ROMANCHUK, M. A.

USSR/Chemistry, Analytical - Alkaloids, Jul/Aug 52
Insecticides

"Application of Ion Exchange Resins in the Analysis of Ambasine," F. Ye. Rabinovich, M. A. Romanchuk, All-Union Sci Res Chem-Phar Inst imeni S. Ordzhonikidze

"Med Prom" No 4, pp 38-40

Using a cationic resin (Epsatit from the Kamrovo plant, which has a considerable stability toward acids), ambasine was adsorbed from the soln. It was then extracted with 40% sulfuric acid and deriv

colorimetrically after reaction with HCNH, which proceeds under formation of colored deriv of glutaric aldehyde.

22223

22223

Roman chuk, M. A.

Use of ionites in analysis of alkaloids. M. A. Roman-
chuk, F. E. Rabinovich, and Z. V. Kalichman. *Trudy*
Khim. i Anal. Khim. Akad. Nauk S.S.S.R., Inst. Geo-
khim. i Anal. Khim. 6, 391-6 (1955); cf. Soboleva, *Gosudarst.*
farmakopeya 1952, p. 474 (C.A. 48, 11735c). Methods are
given for sepn. of anabesine, spherofizine, and a morphine-
codeine mixt. from exts. Anabesine was absorbed from an
aq. plant ext. and from anabesine sulfate soln. Resin
KU-1 in H form, grain size 0.20-0.75 mm., was washed
until neutral and transferred to a column 15 x 1.5 cm.
The ratio of absorbent to absorbed substance was 100:1.
The sample was neutralized to phenolphthalein with NH₄OH
and filtered. Anabesine was desorbed with 40 ml. 40%
H₂SO₄ and detd. by the colorimetric method of Klyshev
(C.A. 46, 6708g). Compared to the chem. method in
GOST the relative error for anabesine sulfate was 0.5-3%
and for plant exts. (contg. approx. 1% anabesine) 2-7%.
Permutit SKh (10 g.) was washed with H₂O. An aq. ext.
contg. approx. 0.03 g. spherofizine was filtered. The
Permutit was washed with 20-30 ml. H₂O and then with
10% NaCl at 0.05 ml./min. sq. cm. until silicotungstic
acid gave no alkaloid test. Approx. 140-160 ml. NaCl
soln. are required. The filtrate was analyzed by Mac-
pherson's (C.A. 36, 8184*) colorimetric α -naphthol method
and by bromometric titration. The results agreed with
the usual prolonged chem. method. Anionite N-O was
soaked several hrs. in 2% Na₂CO₃, washed, and trans-
ferred to the column. The morphine-codeine soln. was
neutralized to phenolphthalein with NH₄OH and filtered at
0.1 ml./min. sq. cm. The column was washed by MeOH.

All-Union Sci.-Res. Chemical-Pharmaceutical Inst. in Ordzhonikidze
Ministry Pub. Health

ROMANCHUK, M.A. RABINOVICH, E.E.
EtOH, Me₂CO, and 30 ml. H₂O. The filtrate was acidified
evapd. on a steam bath, transferred to a volumetric flask
and analyzed for codeine. Morphine was desorbed with 5%
H₂SO₄ and detd. Good results were obtained on samples
contg. approx. 0.01 g. codeine and 0.01-0.005 g. morphine.
Eurilla Mayerle

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2/2
PM

ROMANCHUK, M. A.

9
V. Spherophysine. M. A. Romanchuk and L. G. Demina.
U.S.S.R. 102,841, June 25, 1958. The title compd. is ad-
sorbed from an aq. suspension of *Salvia* on the ion exchanger
KU-2 and is subsequently desorbed with an H₂O-iso-PrOH
soln. of alkali and soda. After driving off the alc. and
water, spherophysine is obtained as the carbonate.
M. Hosen //

fm

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4E4j

ROMANOVICH, M.A.

DOZORTSEVA, P.M.; LETINA, V.S.; MASHKOVSKIY, M.D.; MIRER, Ye.A.;
RABINOVICH, P.Ye.; ROMANCHUK, M.A.

Magnesium trisilicate, its production and properties. Med.prom.
10 no.4:20-22 O-D '56. (MIRA 10:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S.Ordzhonikidze.
(MAGNESIUM SILICATES)

RABINOVICH, F.Y.; ROMANCHUK, M.A.

Quantitative determination of substituted malonic esters
present in combination. Med.prom. 13 no.3:33-36 Mr '59.
(MIRA 12:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevti-
cheskiy institut imeni S.Ordzhonikidze.
(MALONIC ACID)

ROMANCHUK, M.A.; DEMINA, L.G.; LABENSKIY, A.S.; SANDOMIRSKAYA, G.A.

Separation of morphine from industrial wastes. Med. prom. 15 no. 4:54-57
Ap '61. (MIRA 14:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S. Ordzhonikidze.
(MORPHINE)

ROMANCHUK, M.A.; DEMINA, L.G.

Use of ion exchange substances for codeine extraction.
Med. prom. 16 no.2:35-39 F '62. (MIRA 15:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskii institut imeni S.Ordzhonikidze.
(CODEINE)

(ION EXCHANGING SUBSTANCES)

I. 08017-67 EWT(1) GW
ACC NR: AR0025357

SOURCE CODE: UR/0269/66/000/004/0070/0070

AUTHOR: Romanchuk, P. R.

TITLE: On the question of the nature of solar activity

SOURCE: Ref. zh. Astronomiya, Abs. 4.51.521

REF SOURCE: Solnechnyye dannyye, no. 5, 1965, 65-68

TOPIC TAGS: sun, solar activity, solar activity cycle, ~~activity~~ *sunspot*

ABSTRACT: An attempt has been undertaken to explain the 11-year cyclicity of solar activity by the action of the planets on the unstable layers of the Sun. Comparison of the moments of connections and quadratures of Saturn and Jupiter with the phase of the cycle shows that the maximum action of Jupiter and Saturn upon the process of sunspot generation is correlated with the quadratures of these planets, and the character of the cycle depends upon the time of the quadrature beginning relative to the beginning of the cycle. Scrutiny of the time intervals (ΔT) between the onset of quadrature and the beginning of the corresponding cycle with the relative number of sunspots in the maximum (W_{max}) shows, that the events of quadrature onset before the minimum, and also after it, 4 years or later, correspond to cycles with low activity at the maximum; the events of quadrature start after the minimum, after 1 to 2.5 year, correspond to cycles with large values of W_{max} . The dependence of W_{max} on ΔT characterizes the result of the average action of planets during the quadrature moments upon the Sun's

UDC: 523.745

Card 1/2

L 08917-67

ACC NR: AR6025357

layers. The most propitious state of the Sun's layers for the significant action on them by the planets occurs on the average 1.6 years after the minimum of activity.
[Translation of abstract].

SUB CODE: 03

Card 2/2 *for*

SOURCE CODE: UR/0269/66/000/006/0064/0064

ACC NR: AR6028771

AUTHOR: Romanchuk, P. R.

TITLE: On the nature of solar activity. II. Altitudes and durations of cycles of solar activity and the position of planets in orbits

SOURCE: Ref. zh. Astronomiya, Abs. 6.51.493

REF SOURCE: Solnechnyye dannyye, no. 7, 1965, 65-74

TOPIC TAGS: sun, sunspot, solar astronomy, solar activity

TRANSLATION: This is a continuation of the author's article under the same title (see *RZh. Astr.*, 1966, 4.51.521). It is demonstrated that the relative height of the maximum, as well as the duration of the cycle of solar activity can be calculated if the following data are known: the minimum moment of the cycle, the quadrature moments of Jupiter and Saturn closest to the minimum, and the longitudes of Jupiter, Saturn, Earth and Venus. Graphs and tables are included. The established relationships indicate that the solar activity is related to the planetary influences. These relationships can be used for the prediction of the minimum and maximum moments of solar activity. T. M.

SUB CODE: 03

UDC: 523.745

Card 1/1

S/033/62/039/001/005/013
E032/E514

AUTHOR: Romanchuk, P.R.
TITLE: The visibility of sunspots and the east-west asymmetry of solar activity. 1

PERIODICAL: Astronomicheskii zhurnal, v.39, no.1, 1962, 48-57

TEXT: In an earlier paper (Ref.1: Astron.zh., 38, 66, 1961) the author showed that the east-west asymmetry in the appearance of new groups of sunspots cannot be completely explained by the rotation of the sun, the development of the groups and the "perspective" reduction in the areas of the spots if they are produced uniformly with respect to the solar longitude. In another paper (Ref.2: Astron.zh., 31, 743, 1959) the present author and T. P. Kudinova showed that a considerable number of groups originate and appear on the eastern part of the disc in the longitude range between -80° and -70° . A fraction of the groups appearing in this range originate at between -80° and -85° from the centre of the disc. However, according to Ref.1 groups originating between -85.3° and $-70^{\circ}.5$ should appear, i.e. become accessible to observations, only in the longitude range between -85.3° and $-70^{\circ}.5$.
Card 1/3

human eye
the structure
It is
determined by all the

The visibility of sunspots ...

S/033/62/039/001/005/013
E032/E514

above factors but is mainly governed by the foreshortening effect. In the region between 0° and 80° the true areas can be determined from the sec λ law for sunspots with areas greater than 10^{-5} of the area of the disc. It is concluded that the longitude distribution of sunspot production is nonuniform and the eastern part of the disc contains a 25% surplus which is associated with the effect of the earth on the sun. There are 1 figure, 5 tables and 10 references: 4 Soviet-bloc and 6 non-Soviet-bloc. The four latest English-language references read as follows: Ref.6: Y.H.A. Archenhold, Ph.D., Monthly Notices Roy.Astron.Soc., v.100, Nos. 8 and 9, 44, 1950; Ref.7: T.G.Cowling, Ibid, 106, 218, 1946; Ref.8: J. Houtgast, A. Sluiter, Bull. Astron. Inst. Netherl., 10, 325, 1948; Ref.9: Greenwich observations, 1917-1919, 1926-1929, 1946-1947. ✓

ASSOCIATION: Kafedra astronomii Kievskogo gos. universiteta
(Department of Astronomy, Kiev State University)

SUBMITTED: December 31, 1959

Card 3/3

AUTHOR: Romanchuk, P. S.

20-4-34/52

TITLE: The Stabilizing Effect of Magnesium Upon Ascorbic Acid
(Stabiliziruyushcheye deystviye magniya na askorbinovuyu kislotu).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 4, pp. 665-667 (USSR)

ABSTRACT: It was state (references 1-4) that ascorbic acid is easily destroyed by the influence of ferments. A similar effect have: alkaline surroundings, ferrous oxides, cupruous oxides and others. On the other hand (reference 3) under natural conditions the decomposition of this vitamin is hindered by glutathione, yantine, uric acid, theophylline, and creatinine. The oxydation of ascorbic acid is retarded by thiamine (references 5,6), hemoglobin, catalase and others. When the author studied the accumulation of this vitamin in potatoes, barley, and others under the influence of mineral nourishment, he noticed that magnesium increases the proportion of ascorbic acid remarkably. In this case almost the whole vitamin quantity appears in a reduced form. This increased quantity of ascorbic acid was observed in potato tubers, which had developed on sufficient quantities of Mg nourishment. In spring the average proportion of

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The Stabilizing Effect of Magnesium Upon Ascorbic Acid

20-4-34/52

ascorbic acid in these tubers was by 25-30 % higher than in ordinary tubers. With that their outward appearance was sound and they tasted good. Moreover the Mg influence displays itself by increased accumulation of chlorophyll in the potato leaves, by increased proportions of starch, and by higher harvest results. From that the question results whether Mg could not be a stabilizer of ascorbic acid. In order to confirm this supposition experiments with a synthetic preparatory of ascorbic acid were made. Different solutions and their combinations were added to each vessel containing 50 milliliters of watery solution of this preparatory (25 milligrams per 100 milliliters of the solution) in order to create for the ascorbic acid similar surroundings with Mg and without. Then $MgCl_2$, $MgSO_4$, and $Mg(CH_3COO)_2$ were added in quantities of 25 milligrams per vessel. pH was kept on the same level. The loss of ascorbic acid was determined each day by means of titration. The results are given in table 3. From that can be seen that the decomposition of ascorbic acid in presence of Mg is certainly retarded, independent of the reaction of the surroundings. The stabilizing effect of Mg is strongest in acid surroundings with the exception

Card 2/4

The Stabilizing Effect of Magnesium Upon Ascorbic Acid

20-4-34/52

of H_2SO_4 . Alkaline surroundings favour the quick decomposition of the vitamin. The presence of Mg, especially of magnesium acetate mitigates this destructive effect. SO_4 ions prevent the stabilizing effect of Mg, and if they are contained in a solution, the ascorbic acid is quickly destroyed. The author supposes that the Mg ions prohibit the oxydation of the ascorbic acid by reacting with their dienole grouping. The oxydation of this group forms the first stage of the decomposition of this vitamin as is well known. In order to confirm this, magnesium and sodium ascorbate were produced. Figures 1 and 2 show that the electrical conductivity of the magnesium derivative of ascorbic acid is considerably lower than that of the sodium salt of the same acid. Moreover 1 gram-mole of ascorbic acid is capable of a reaction with only 0,5 gram-mole of MgO or another Mg combination. This proves that 2 molecules of ascorbic acid are connected by a Mg bridge. Thus the most unstable dienole groups are tied by Mg, and just this fact proves its stabilizing effect. Cryoscopic determinations of the molecular weight have confirmed these reflexions.

Card 3/4

The Stabilizing Effect of Magnesium Upon Ascorbic Acid

20-4-34/52

There are 1 figure, 3 tables, and 12 references, 9 of which are Slavic.

ASSOCIATION: Zhitomir Agricultural Institute (Zhitormirskiy sel'skokhozyaystvennyy institut).

PRESENTED: July 9, 1957, by A. I. Oparin, Academician

SUBMITTED: November 26, 1956

AVAILABLE: Library of Congress

Card 4/4

SKOPETS, Z.A. (Yaroslavl'); OSTROVSKIY, A.I. (Moskva); BESKIN, L.N. (Moskva);
BALK, M.B. (Smolensk'); BORSUK, M.V. (L'vov); BYKOV, A.M. (Ba'ku);
CHANTURIYA, Z.A. (Tbilisi); NOVIKOVA, V.S. (Orekhovo-Zuyevo); DUBNOV,
Ya.S. (Moskva); STECHNIK, S.B. (Moskva); KHAVIN, L.P. (Leningrad);
ERDNIYEV, P., (Stavropol'); CHIAREULI, D.L. (GruzSSR); ASKERITOV, U.M.
(Yaroslavl'); GOLUBEV, V.A. (Kuvshinovo); MALININ, V.V. (Leningrad);
DAVYDOV, U. (Gorol'); ROZENBERG, V.I. (Leningrad); TIKHONOV, P.G.
(Kamaganda); ROMANCHUK, N.A. (Khar'kov); MINLOS, R.A. (Moskva); OGAY,
S.V. (Frunze); ROTE-BELETTOV, F.S.; BERSHTEYN, A. (Moskva); ARLAZAROV,
V.L. (Moskva)

Solutions to problems. Mat.pros. no.4:253-270 '57.

(MIRA 12:11)

(Mathematics--Problems, exercises, etc.)

ROMANCHUK, N. A.

44-1-65

Translation from: Referativny Zhurnal, Matematika, 1957, Nr 1, p. 8 (USSR)

AUTHOR: Romanchuk, N. A.

TITLE: Some Criteria Concerning Irrationality of Infinitely Continued Fractions (Nekotoryye kriterii irratsional'nosti tsepnykh drobey)

PERIODICAL: Uch. zap. Khar'kovsk. gos. ped. in-t, 1957, 18, pp. 103-111

ABSTRACT: The question concerning the irrationality of the infinitely continued fraction

$$\frac{m_1}{n_1 + \frac{m_2}{n_2 + \frac{m_3}{n_3 + \dots}}}$$

(1)

is investigated, where m_k, n_k are natural numbers.

Let P_k/Q_k be a reduct of k order of the infinitely continued fraction (1).

Card 1/3

ROMANCHUK, P.R.

Nature of solar activity. TSir. KAO no. 71:16-20 '62.
(Sun) (MIRA 16:6)

ROMANCHUK, F.R.

Sunspot formation and solar magnetic fields. Astron. zhur. 42
no.4:775-783 JI-Ag '65. (MIRA 18:8)

1. Astronomicheskaya observatoriya Kiyevskogo gosudarstvennogo
universiteta.

ACELIOTH, P.R.

Nature of the east-west asymmetry of solar activity. Astron.
zhur. 38 no. 1:66-74, Jan. '61. (MIRA 14:2)

1. Kafedra astrofiziki Kievskogo gosudarstvennogo universiteta.
(Sungspots)

ROMANCHUK, P.R.; SIBIRYAKOVA, M.; DROZDOV, S.

~~Aurora borealis. Astron. tsir. no.187:25-26 D '57. (MIRA 11:6)~~

1. Kiyevskiy gosudarstvennyy universitet (for Romanchuk). 2. Meteor-
nyy otdel Moskovskogo Vsesoyuznogo astronomo-geodezicheskogo ob-
shchestva (for Sibiryakova). 3. Novgorodskiy pedagogicheskiy insti-
tut (for Drozdov).

(Auroras)

ROMANCHUK, P.R.

~~Formation of sunspots and solar magnetic fields. Part 1.~~
Astron. zhur. 40 no.3:477-486 My-Je '63. (MIRA 1636)

1. Astronomicheskaya observatoriya Kiyevskogo universiteta.
(Sunspots) (Magnetic fields)

ROMANCHUK, P.R.

Visibility of sunspots on the solar disk and the east-west
asymmetry of solar activity. Part 1. Astron.zhur. 39 no.1:48-
57 Jan. 1962. (MIRA 15:2)

1. Kafedra astronomii Kiyevskogo gosudarstvennogo universiteta.
(Sunspots)

L 00463-66 ENT(1) GW

ACCESSION NR: AP5020678

UR/0033/65/042/004/0775/0783
523.745

AUTHOR: Romanchuk, P. R.

46
44
B

TITLE: Formation of sunspots and solar magnetic fields. 2

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 4, 1965, 775-783

TOPIC TAGS: sunspot, solar corona, photosphere, magnetic field, proton, plasma flow,
solar activity 12,55

ABSTRACT: Arguments are given in support of the hypothesis that high energy particle streams carry the toroidal magnetic fields of sunspots and bipolar regions into the solar corona. These particle streams not only focus the field lines but stretch them into radial forms, thus accounting for the formation of radial coronal rays. From the interaction of corpuscular streams and magnetic fields the formation of straight-line and fan rays at various levels of the solar atmosphere is deduced. These straight-line and fan-shaped rays are shown to be geoeffective and responsible for generating magnetic disturbances. The delay in the maximum of the geomagnetic disturbance as compared with the solar activity maximum is attributed to the delay in the formation of these rays. From the evolution of the coronal shapes and the bunching together of the magnetic lines of fan rays closing upon themselves in

Card 1/3

L 00163-66

ACCESSION NR: AP5020678

2

subphotospheric layers, the formation of solar magnetic fields is deduced. This hypothesis is shown schematically in Fig. 1 on the Enclosure. The maximum stress of these field lines at the poles occurs during minimum solar activity. From the detailed analyses of 38 coronal diagrams it is shown that, during the process of magnetic line "bunching," the coronal rays pass through various stages of development. The lines of force of the general solar field emerge from the subphotosphere at the poles and close on themselves in interplanetary space, forming polar ray structures and very large equatorial fan rays. The highly conductive charged particle streams emanating from the solar corona carry out radially the general field lines into interplanetary space. Orig. art. has: 6 figures.

ASSOCIATION: Astronomicheskaya observatoriya, Kiyevskiy gos. universiteta
(Astronomical Observatory, Kiev State University)

SUBMITTED: 12Sep61

55

ENCL: 01

SUB CODE: AA

NO REF SOV: 009

OTHER: 004

Card 2/3

L 00463-66

ACCESSION NR: AP5020678

ENCLOSURE: 01

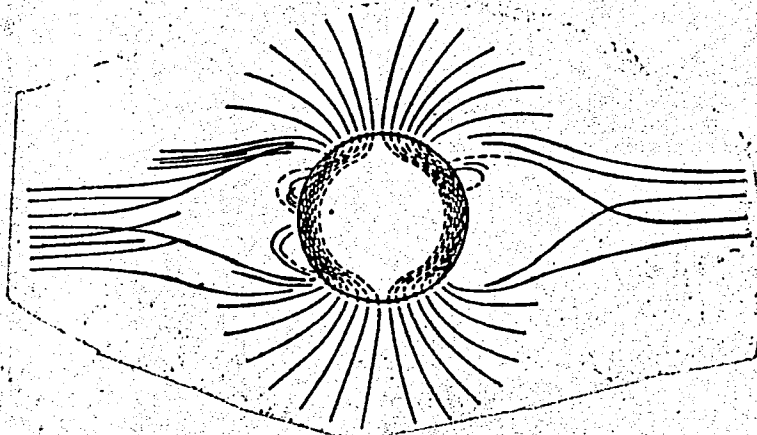


Fig. 1.

Card

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L 11188-63

EWI(1)/FCC(w)/BDS/ES(v)--AFFTC/ESD-3--Pe-4--OW

ACCESSION NR: AP3001241

S/0033/63/040/003/0477/0486

AUTHOR: Romanchuk, P.R.

TITLE: The formation of sunspots and the magnetic fields of the Sun Part 1

SOURCE: Astronomicheskii zhurnal, v. 40, no. 3, 1963, 477-486

TOPIC TAGS: solar activity, sunspots, solar convection currents, magnetic field of sunspot

ABSTRACT: New theoretical arguments are adduced in favor of the formation of the magnetic fields of sunspots by means of a local intensification of the general magnetic field of the sun. A complete summary of existing hypotheses on the origin and evolution of the magnetic fields of the sun is set forth. The new hypothesis postulates the formation of the magnetic field of a bipolar group of spots (active regions), which is founded on the assumption of large-scale convective motion of matter in the subphotospheric layers of the sun. The ascent of any one convective element and the subsidence of plasma layers adjacent to it within the general magnetic field of the sun forms a system of toroidally shaped magnetic fields. These fields, produced by inductive currents, lie in a vertical plane parallel to the magnetic field of the sun and encompass the

Card 1/3

L 11188-63

ACCESSION NR: AP3001241

convective elements. The magnetic fields of a plurality of convective elements, upon their emergence to the surface layer of the sun, unite into the formation of magnetic fields of a bipolar group of spots. The structure of these fields is found to be in accord with the observations of V.Ye.Stepanov (Krymsk. astrofiz. observ., Izv., v.25, 1961, 154) and V. Bumba (ibid., v.23, 1960, 212), according to which the magnetic field of each spot has two polarities. The magnetic field strength of the convective elements is estimated. It is shown that magnetic fields of 10-sup-3 to 10-sup-4 gauss can form, if convective elements (of an order of dimensional magnitude of 10-sup-9) rise at a rate of ascent of 10-sup-3 to 10-sup-4 cm/sec for a time of 10-sup-6 to 10-sup-7 sec within an initial field of 50 gauss. Further clarification is necessary for the cause of the formation of large-scale currents of matter (characteristic dimension: 10-sup-9cm) that obey a specific regularity from cycle to cycle. It is also not clear at this time whether the general magnetic field of the sun participates in the meridional circulation (if it exists at all). The meridional circulation may perhaps be the reason for the rise of the convective currents, but this remains to be studied further.

ASSOCIATION: Astronomicheskaya observatoriya Kiyevskogo universitetd (Astronomical Observatory, Kiev University)

Card 2/3

L 11188-63

ACCESSION NR: AP3001241

SUBMITTED: 12Oct61

DATE ACQD: 01Jul63

ENCL: 00

SUB CODE: AS, PH

NO REF SOV: 014

OTHER: 006

ch/10
Card 3/3

ROMANCHUK, P.R.

Visibility of spots on the solar disk and the east-west asymmetry
of solar activity. Part 2. Astron.zhur. 39 no.3:445-458 My-Je
'62. (MIRA 15:5)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.
(Sunspots)

30482

S/033/62/039/003/005/010
E032/E114

3.1540

AUTHOR: Pomanchuk, P.R.

TITLE: Visibility of sunspots and the East-West asymmetry in solar activity. II.

PERIODICAL: Astronomicheskii zhurnal, v.39, no.3, 1962, 445-458

TEXT: It was shown in Part I of this work (Astron. zh., v.39, 1962, 48) that the visibility function for sunspots is identical in form with the function describing their foreshortening. However, sunspot visibility depends also on image vibration, sunspot structure, the distribution of sunspots on the solar surface, and so on. The aim of this paper was to elucidate the effect of these factors on sunspot visibility by determining the boundaries of sunspots as functions of their position, form and inclination of axes. The analysis was based on data obtained in 1958 with a chromospheric-photospheric telescope by the staff of the Astronomicheskaya observatoriya Kiyevskogo universiteta (Astronomical Observatory of the Kiev University). Photographs of single spots were examined with the aid of microphotometer,
Card 1/3

Visibility of sunspots and the ...

S/033/62/039/003/005/010
E032/E114

and it was found that there was no difficulty in determining the photometric dimensions of sunspots. However, visual observations are also of interest because they are often quoted by the Solar Service. They were therefore compared with the photometric observations. It was found that near the limb the visible boundary of the sunspot is located at a higher relative intensity of the penumbra and photosphere (0.91) than in the central region (0.77). An empirical graph is reproduced showing the relation between the visual and photometric boundaries of sunspots. The analysis was carried out both for the radial and tangential sections of sunspots and it was noted that in the marginal zone the intensity gradient is larger in the tangential direction than in the radial direction. This effect is different for the "visible" and "photometric" sunspots. Altogether 165 visible and photometric forms of sunspot were investigated. It was found that there was a considerable elongation of sunspots in the radial direction which increased towards the limb. The elongation is particularly large for sunspots with small areas (5 - 120 millionths of the area of the hemisphere).

and 2/3

Visibility of sunspots and the

S/033/62/039/003/005/010
E032/E

The elongation is absent for sunspots with areas greater than 200×10^{-6} (same units). The differences in the elongation of sunspots in the Eastern and Western parts of the disc were used to determine the inclination of the sunspot axes towards the axis of rotation of the sun and this was found to be $20^\circ 20' \pm 10' 30''$.

It is argued that the data supplied by the Solar Service are not sufficiently accurate to detect sunspot inclination effects and hence the East-West asymmetry in sunspot formation is not associated with the inclination of the axes of sunspots. It is concluded that the elongation of both photometric and visible sunspots is due to vibrations in sunspot images. The tangential photometric dimensions are found to be shortened by this effect to a greater extent than the visible dimensions.

There are 7 figures and 6 tables.

ASSOCIATION: Kiyevskiy gos. universitet im. T. G. Shevchenko
(Kiev State University imeni T. G. Shevchenko)

SUBMITTED: April 20, 1959

Card 3/3

USSR/Plant Physiology - Respiration and Metabolism.

I.

Abs Jour : Ref Zhur - Biol., No 23, 1958, 104347

Author : Romanchuk, P.S.

Inst : ~~Zhitomir~~ Agricultural Institute.

Title : On the Forms and Transformations of Ascorbic Acid in Potato Leaves.

Orig Pub : Nauchn. Tr. Zhitomirsk. K.-Kh. In-t, 4, 153-162, 1957.

Abstract : Potatoes of the Parnassiya variety were grown in sand cultures. The principal scheme of the experiment was as follows: (1) control - a complete nutrient mixture; (2) ground Ca; (3) ground Mg; and (4) ground HCl. The plants of the third version were characterized by the maximum content of chlorophyll in leaves and starch in tubers, and by a well-developed root system. The growth and development of the plants of the fourth version were

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- 6 -

GUPALO, P.I.; ROMANCHUK, P.S.

Specific role of roots in the above-ground growth of
plants. Dokl. AN SSSR 147 no.2:493-495 N '62. (MIRA 15:11)

1. Zhitomirskiy sel'skokhozyaystvennyy institut.

Predstavleno akademikom A.L. Kursanovym.

(Botany —Physiology)

(Roots—(Botany))

EXCERPTA MEDICA Sec 2 Vol 12/7 Physiology July 59

2771. STABILIZING EFFECT OF MAGNESIUM ON ASCORBIC ACID (Russian text) - Romanchuk P. S. - DOKLADY AKAD. NAUK SSSR 1957, 117/4 (665-667) Graphs 1 Tables 3

Mg salts stabilize ascorbic acid in acid and slightly alkaline solution, probably owing to the reaction of Mg ion with the dienol group of the acid. Edward - Montreal

ROMANCHUK, P.S.

Development of chloroplastids in potato leaves as effected by the conditions of mineral nutrition [with summary in German]. Fiziol.rast. 5 no.5:400-408 S-O '58. (MIRA 11:11)

1. Zhitomirskiy sel'skokhozyaystvennyy institut, Zhitomir.
(Plants, Effect of minerals on) (Chromatophores) (Potatoes)

89322

S/033/61/038/001/005/019

E032/E314

3,1540 (1062, 1128, 1184)

AUTHOR: Romanchuk, P.R.

TITLE: On the Nature of the East-West Asymmetry in Solar Activity

PERIODICAL: Astronomicheskii zhurnal, 1961, Vol. 38, No. 1, pp. 66 - 74

TEXT: The E-W asymmetry in the points of origination of sunspots (groups of sunspots) was considered by the present author and Kudinova in Ref. 1. According to the data reported by Waldmeier (Ref. 3) the majority of sunspots originate on the East half of the disc. Waldmeier has obtained a theoretical distribution of the form

$$\frac{dN}{d\alpha} = n(1 + \omega\Delta_0\alpha) \quad (1)$$

where Δ_0 is the preliminary development time. However, there has been some doubt as to the actual magnitude of Δ_0 .

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and the aim of the present paper is to reconsider the form and cause of the E-W asymmetry. The present author derives a theoretical distribution for the points of origination of sunspot groups and shows that the time of preliminary development depends on the interval of time between successive observations of spot groups. The expression obtained is of the form:

$$t_0 = t \cos (\alpha + \omega t) \quad (8)$$

where α is the distance from the central meridian,
 ω is the synodic velocity of rotation of the sun and
 t is the time measured from the instant at which the spot originates.

The theoretical distribution of the points of origination is compared with the observed distribution and an application of Pearson's criterion shows that the discrepancy between the theoretical and observed distributions is not random. It is

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concluded that the observed distribution of group origination cannot be completely accounted for by taking into account the influence of the sun's rotation, the development of the groups and the perspective reduction in spot areas. The E-W asymmetry cannot be completely accounted for by the Waldmeier theory, nor can it be completely associated with the effect of the Earth on solar processes. The excess of sunspots on the East half of the disc may possibly be due to the effect of planets on solar processes. Acknowledgments are made to Professor S.K. Vsekhsvyatskiy who directed this work. There are 3 figures, 5 tables and 8 references: 3 Soviet and 5 non-Soviet.

ASSOCIATION: Kafedra astronomii Kiyevskogo gos. universitet
(Department of Astronomy, Kiyev State University)

SUBMITTED: July 1, 1959

Card 3/3

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Mechanical programmer for honing machines. Stan. i instr. 36
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53436
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Author : Romanchuk, R.S.
Institut. : Zhitomirskaya Oblast Scientific Society for the *
Title : The Importance of Magnesium Fertilizers in the
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Orig. Pub. : Byal. sil's'kogospod. inform. Zhiten. obl. vid.
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Author : Shchetinina, L.L., Sirenko, N.A., Romanchuk, P.S.
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Title : The Soils of the New Vatutin and Kirov Kolkhozes
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Orig Pub: Nauchn. tr. Zhitomirsk. s.-kh. in-t, 1957, 4,
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